REMARKS

The Application has been carefully reviewed in light of the Office Action dated May 21, 2003 (Paper No. 11). Claims 1 to 20 are in the application, of which Claims 1, 18, and 19, the independent claims, are being amended herein. Reconsideration and further examination are respectfully requested.

Independent Claims 1, 18 and 19 were rejected under 35 U.S.C. § 112, first paragraph. More particularly, the Office Action, at page 2, alleges that the limitation of a "first packetizing means controlling the first data length in accordance with at least a second data length" is not supported by the description of the invention in the present Application.

The amendments made to Claim 1, 18 and 19 remove the above-identified limitation. Applicant does not however concede the correctness of the rejection, since it is believed that the limitation is fully supported by the originally-filed Application. The amendments made to Claims 1, 18 and 19 are also believed to be fully supported by the specification as originally filed. For example, support can be found at page 11, line 15 to page 12, line 16 and page 15, line 11 to page 17, line 2. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Turning to the art rejection, Claims 1 to 20 were rejected under 35 U.S.C. §102(e) over U.S. Patent 6,333,950 (Karasawa).

In a conventional approach, packets of encoded data in a packetized elementary stream (PES) are in turn packetized into packets of a transport stream (TS). The data length of a PES packet need not be an integer multiple of the payload length of a

TS packet. Consequently, the remainder of the payload of a TS packet that is not used by a PES packet is unused space that is typically filed with filler data.

According to the present invention, audio and/or video stream data is compression-encoded and then packetized into a first data train of PES packets, which are in turn packetized into a second data train of TS packets. The second data train has a corresponding predetermined fixed payload length, and the encoded data in the first data train is packetized based on a first data length which is determined in accordance with at least the payload length of the second data train.

By virtue of this arrangement, the data length of packets in the first data train may be controlled to accommodate the fixed payload length of packets in the second data train, thereby optimizing the transport space of the second data train and minimizing transmission of filler data. Thus, more efficient data transmission can be achieved.

Turning to the specific language of the claims, Claim 1 concerns a data processing apparatus comprising an input means for inputting data, which is compression-encoded by an encoding means. A first packetizing means packetizes the encoded data into a first data train based on a first data length. A second packetizing means packetizes the first data train into a second data train, which has a corresponding predetermined fixed payload length.

An important aspect of the apparatus is that the first data length used in packetizing the encoded data into the first data train is determined in accordance with the

predetermined fixed payload length corresponding to the second data train. The applied art, namely Karasawa, is not seen to disclose at least this aspect.

More particularly, Karasawa is merely seen to control the timing at which PCR data is inserted into a TS packet, and is not seen to control the length of either the PES packet or the TS packet. That is, Karasawa is seen to insert a PCR value in a TS packet when buffered data consisting of PES packets does not completely fill the payload space of a TS packet. Using the unused space in a TS packet that is not used by the buffered PES packet data to insert PCR data is not seen to be the same as packetizing encoded data based on a first data length that is determined in accordance with a payload length corresponding to a second data train.

Referring to Figure 5 and col. 4, lines 10 to 65, Karasawa describes a packetizing means 102 generating a PES packet from data encoded by encoder 101. The length of the generated PES packet is determined by PES_packet_length detector 103, and the generated PES packet is stored in buffer 104. To generate a payload portion of a TS packet 184 bytes in length, Karasawa is seen to describe extracting PES packet data from the buffer 104 up to 184 bytes. See block S205 of Figure 7. The PCR data is seen to be added to the TS payload when the PES packet data extracted from buffer 104 is less than 184 bytes. See blocks S209 and S219 of Figure 7. Incidentally and where the combination of the buffered PES packet data and the PCR data is not 184 bytes in length, Karasawa is seen to describe inserting filler data into the TS payload to ensure that the payload is 184 bytes in length. (See Figure 7, steps S211 to S215, and the description thereof found commencing at col. 6, line 47, of Karasawa.)

In view of the above discussion, Karasawa is not seen to control a first data length in packetizing compression-encoded data in accordance with a predetermined, fixed payload length corresponding to a second data train.

Accordingly, Claim 1 is believed to be patentable over the applied art. In addition, Claims 18 and 19 are also believed to be patentable for at least the same reasons.

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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